

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018406**Date Inspected:** 29-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance Inspector (QAI) Bert Madison was present at Yerba Buena Island in California between the times noted above for observations relative to the work being performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below.

- 1). OBG Field Welding of Lifting Rod Access Penetration Inserts - (SMAW)
- 2). OBG Field Splice 8E/9E Weld ID: F1, Face A – (SMAW)
- 3). OBG Field Splice 8E/9E Weld ID: B1, Face A – (SMAW)
- 4). OBG Field Splice 8E/9E Weld ID: A3, Face A – (SMAW R-1 Repairs)
- 5). OBG Field Splice of Access Penetration Insert Longitudinal Stiffeners (QA verification)
- 6). OBG Field Splice 4E/5E Weld ID ALS 1, 2 & 3. (QA verification)

- 1). OBG Field Welding of Lifting Rod Access Penetration Insert (SMAW)

Exterior: OBG 4E-PP27-E4 – welds 2, 3 &amp; 4

The QAI periodically observed AB/F approved welder Salvador Sandoval (ID 2202) performing air carbon arc gouging (see photo below) and grinding of two (2) burn through repair areas in E4 weld 2 and one (1) each R-1 UT repair area in E4 weld 3 and E4 weld 4. The QAI observed QC Inspector Tony Sherwood performing Magnetic Particle Testing (MT) of the excavated area prior to repair welding. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1. 5-101 Rev. 4. The QAI later periodically observed welding of the excavated areas per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. QC Inspector Steve McConnell was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. Repair welding was in process

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## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

2). OBG Field Splice 8E/9E Weld ID: F1, Face A – (SMAW)

The QAI periodically observed AB/F approved welder Jorge Lopez (ID 6149) performing welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position of OBG Field Splice 8E/9E Weld ID: F1. QC Inspector Tom Pasqualone was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1040B. The QAI observed that welding of fill passes was in process during the shift and work at this location appeared to be in general compliance with contract documents.

3). OBG Field Splice 8E/9E Weld ID: B1, Face A – (SMAW)

The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position of OBG Field Splice 8E/9E Weld ID: B1. QC Inspector Tom Pasqualone was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1040B. The QAI observed that welding of fill passes was in process during the shift and work at this location appeared to be in general compliance with contract documents.

4). OBG Field Splice 8E/9E Weld ID: A3, Face A – (SMAW R-1 Repairs)

The QAI periodically observed AB/F approved welder Mick Chan (ID 9265) performing grinding to excavate and prepare R-1 Ultrasonic Testing (UT) repair locations for welding. The QAI periodically observed QC Inspector Tom Pasqualone performing Magnetic Particle Testing (MT) of the excavated area prior to repair welding. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. The QAI periodically observed AB/F approved welder Wai Kitlai (ID 2953) performing R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position of OBG Field Splice 8E/9E Weld: A3. See photo below. QC Inspector Tom Pasqualone was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. The QAI randomly observed that welder 2953 completed welding of (1) one excavation with the following dimensions at the following Y location:

1. (A3) Indication 5) – reported at Y = 4335mm,

Excavation Y = 4285, Length = 225mm, Depth = 14mm and Width = 20mm.

The QAI observed that work at this location appeared to be in general compliance with contract documents.

5). OBG Field Splice of Access Penetration Insert Longitudinal Stiffeners (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of 100% of the lengths of OBG Field Splice of Access Penetration Insert Stiffeners at 2E PP17.5 E2- LS- East and the Transverse Stiffener at this location. The OBG Field Splices verified by the QAI at this location appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

6). OBG Field Splice 4E/5E Weld ID ALS 1, 2 & 3. (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of 100% of the lengths of OBG Field Splice 4E/5E Weld ID ALS 1, 2 & 3. The OBG Field Splices verified by the QAI at this location appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

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## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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### Summary of Conversations:

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385 5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Madison,Bert

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer